

## COMFORT. FROM YOUR HOME.

Passiv houses & more



### The comfort passive house

How a passive house becomes a comfort passive house thanks to Variotherm

Pages 4 & 5

# From passive house to Lebensart

In this issue we deal intensively with passive and low-energy houses. In addition to statutory defined standards, there is a whole range of other approaches. In recent years, many planners and architects have developed great 'comfort passive houses' and 'comfort low-temperature houses', of which there are numerous examples on pages 4, 5 and 6 of this edition. Another fascinating project is the 'solar-active house', which is reported on page 7.

Speaking of comfort. This subject is also very appropriate for the Hotel Pulverer in Bad Kleinkirchheim. A 5-star hotel fitted with Variotherm heating and cooling systems where you feel wonderfully relaxed.

Relaxing was something the entire Variotherm team did well at this year's company outing: a leisurely 16 km walk lead us over the ridge of the Anninger and through the vineyards of the spa region.

And at the end, you'll find an article about Lebensart at Variotherm: about our company culture and the things we like. Incidentally, part of our corporate culture is generating renewable energies. This has always been a concern for Variotherm. That's why Variotherm has had its own solar system on the roof of its company offices since the mid-90s

I hope you will enjoy reading this issue and find it informative!

Kind regards,  
Alexander Watzek  
Managing Director Variotherm



Peter Unterrainer  
Sales Manager Middle Austria





Thomas Baumgartner  
Technical Manager

# Passive houses, professionals, practice

Everyone's talking about passive houses. If you are planning to build a house then you'll be thinking about this idea - and some of you will actually go ahead and build one. But before you decide to build a passive house, you should think carefully about the issue of comfort.

A tip from Variotherm: A passive house should always be combined with surface heating/cooling. This way you can optimally and individually manage your personal comfort levels. This mindset and planning approach is preferred in practice by many architects, planners and craftsmen. Only then will a passive house become a comfort, passive house.

## *Thomas Baumgartner on "Passive House & Technology":*

**What's the major priority for a passive house?**

The building density. The n50-value (it describes the exchange of air between inside and outside) for passive houses must not exceed 0.6 per hour. At this level, only a minimal amount of exterior air gets inside the building shell. But, this also means that each passive house must be constantly ventilated.

**Are you allowed to open a window in a passive house?**

In principle, yes. However, you have to be aware that if you open a window in winter the room temperature sinks over a long period. The ventilation systems in a classic passive house are designed so that they only have a very low heat output into the rooms.

## *Peter Unterrainer on "Passive House & Practice":*

**Is it comfortable inside a passive house even with winter temperatures outside?**

All passive houses are not created equal. The fact is, the larger the heated surface area and the more glass there is in the building shell, the more critical the question of heating becomes. The main factors relevant for heating technology are the building size and the relative glass surface area. Our experience indicates that passive houses which are heated exclusively via controlled ventilation systems often do not reach the required room temperature. Customers who have been promised a comfortable living environment have no choice but to retrofit electric radiators or infrared heaters.

**What is the current state of affairs in technical planning?**

Today, numerous passive houses are equipped with surface heating. Due to the very low supply temperatures (max. 30 °C), and the resulting low surface temperatures, I would call it surface regulation rather than surface heating. The heat requirement of a passive house on average is no more than 15 W/m<sup>2</sup> (normally insulated houses require 35-45 W/m<sup>2</sup>). Surface temperatures of walls or the floor just 2-3 °C higher than the air temperature already result in great comfort.

**And the future?**

There is a strong tendency away from air heating and towards surface regulation.

# Not run of the mill

Architect, Martin Bernold Dipl. Ing., does not believe in run of the mill orders. Instead, he places great value on 'the highest quality levels available from the leading edge of technology.' Of course, this basic approach to planning and building is also reflected in the design and finish of his own house. It is a fascinating passive house, which he has lived in with his wife and two children since 2007. A Variotherm floor heating system keeps the place comfortable and cosy in the winter months. Martin Bernold is firmly convinced that a passive house also needs surface heating installed in the walls and/or floors.

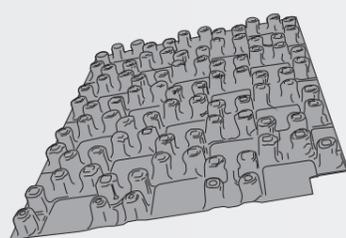
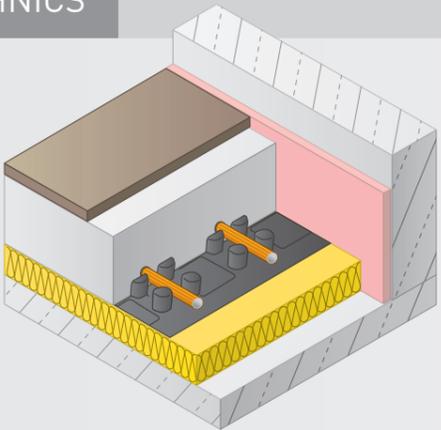
Why did he choose a Variotherm system for his home? It's simple: because Variotherm sets great store in quality and sustainability. Just as Martin Bernold does in all the projects he plans and builds as an architect.



More technics on [www.variotherm.at](http://www.variotherm.at)

TECHNICS

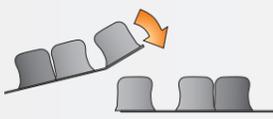
VarioFix Floor Heating



VarioFix panel

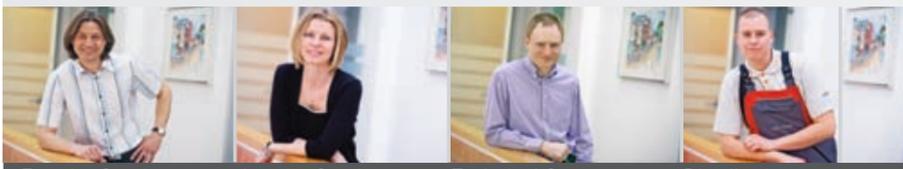


VarioProFile pipe 16 x 2 mm / aluminium 0.25



snap fastening system

**Passiv house in Wiener Neustadt**  
 Commissioned by:  
 DI Martin Bernold  
 Architect:  
 DI Martin Bernold, AT-2700 Wiener Neustadt,  
[www.mbarchitects.at](http://www.mbarchitects.at)  
 Planning/Construction:  
 DI Martin Bernold  
 Variotherm system:  
 90 m<sup>2</sup> FLOOR HEATING VARIOFIX  
 Heat Source: Heat pump  
 Installation:  
 Dinhopl, AT-2700 Wiener Neustadt  
[www.dinhopl.at](http://www.dinhopl.at)



Exterior Service Peter Unterrainer Interior Service Michaela Galavics Technical Support Thomas Baumgartner Distribution Marco Kepler

THE VARIO THERM TEAM FOR THIS PROJECT





# Instead of hot air

A Viennese family are having a wonderful low-energy house built in Schafberg, in the 17th District of Vienna. Surrounded by vineyards and gardens, it not only enjoys wonderful views of Vienna but also has all the advantages of a comfort, low-energy house. The house has Variotherm floor heating in all rooms and on all storeys, heated by a heat pump with deep boreholes. The hot water in the house is also heated in this way. In addition, there is a controlled ventilation system with heat recovery and with air preheating in winter and pre-cooling in summer. Speaking of room climate and summer heat: the large glass areas of the house have special heat-insulated glazing. In addition, there is some shading in summer from the roof overhanging the house.

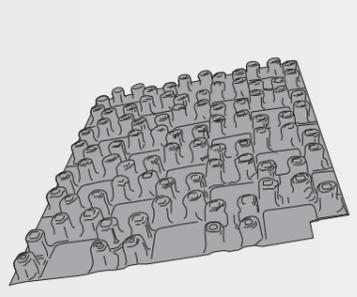
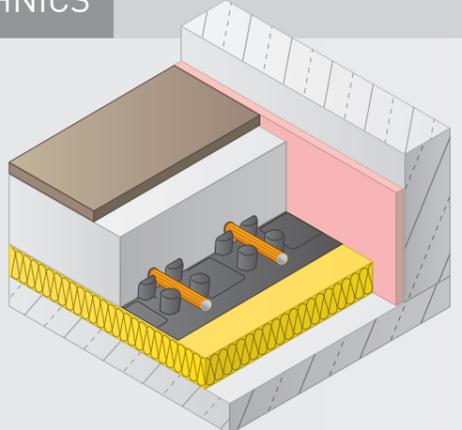
"Such a low-energy house is a very complex matter. Planners must always remember that if it is very cold, the air volume of the air heater must be set very high. The downside: the air in the building is very dry. That is why I only plan passive and low-energy houses with surface heating. Surface heating is so much more comfortable than air heating systems." This is the firm conviction of Josef Unger Ing., who together with architect Zoran Bodrozic Dipl. Ing., planned this low-energy house.



More technics on [www.variotherm.at](http://www.variotherm.at)

TECHNICS

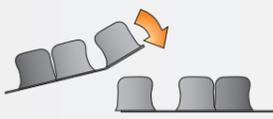
VarioFix Floor Heating



VarioFix panel



VarioProFile pipe 16x2/Alu0,25



snap fastening system

Low-energy house in Vienna

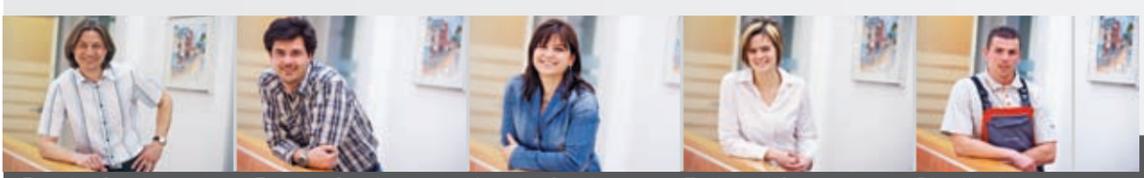
Architect:  
DI Zoran Bodrozic, AT-1060 Wien  
[www.azb.co.at](http://www.azb.co.at)

Planning/Construction:  
TB Unger, AT-2371 Hinterbrühl  
[www.sol5.at](http://www.sol5.at)

Variotherm system:  
550 m<sup>2</sup> FLOOR HEATING VarioFix

Heating:  
Heat pump with deep boreholes

Installation: Hutter & Stifter GmbH,  
AT-7202 Bad Sauerbrunn  
[www.hutterstifter.at](http://www.hutterstifter.at)



Exterior Service Peter Unterrainer    Exterior Service Robert Kissner    Interior Service Pamela Papst    Technical Support Monika Biacsics    Distribution Roland Richter

THE VARIOTHERM TEAM FOR THIS PROJECT



# Active rather than passive



"The solar-active house is a further development of the passive house with significantly improved living comfort." This is how Georg W. Reinberg Dipl. Ing., the architect of the solar-active house, describes his revolutionary creation. Revolutionary because this is the first time the energy requirements for annual heating and hot water have been covered by solar energy alone.

How does that work? By using healthy building materials (wood, loam, cellulose), minimising heat loss and maximising solar yields. The energy generated is converted into room heating or cooling in summer as well as into hot water and electricity. For optimum comfort and style the solar-active house is equipped with Variotherm floor heating and modular wall heating/cooling. The advantage: the latter ensures that living areas are kept pleasantly cool on hot summer days using cold water and a solar-operated absorption refrigerator.



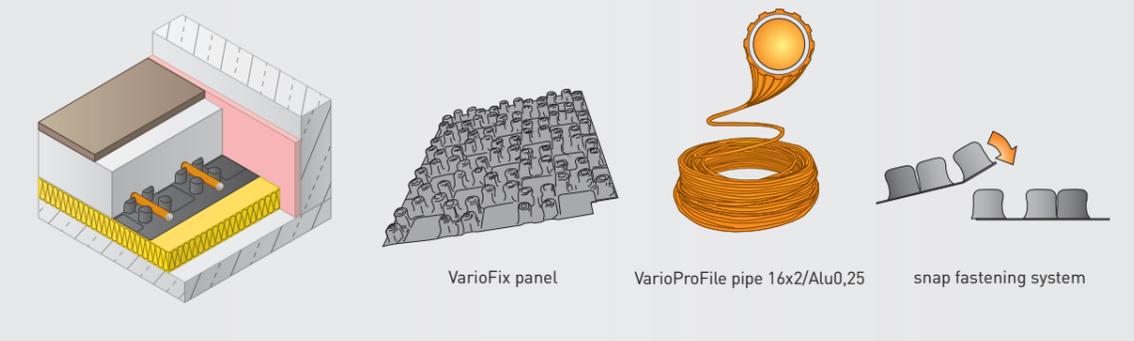
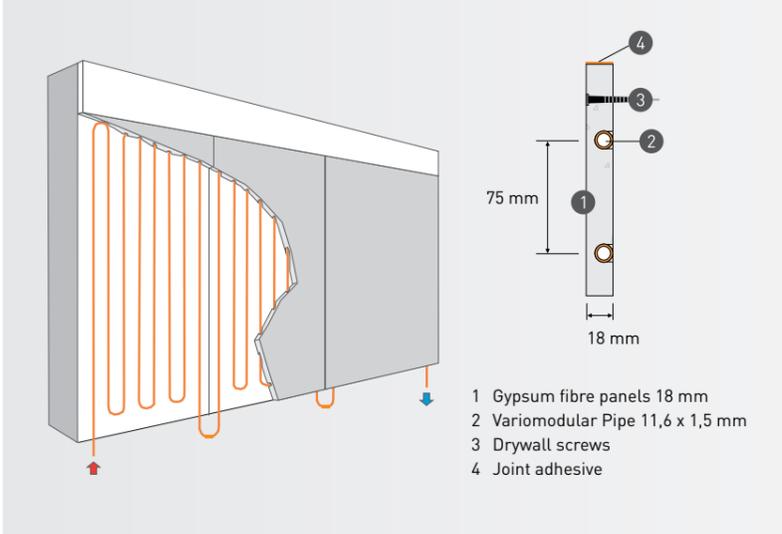
Photo © SONNENKRAFT

More technics on [www.variotherm.at](http://www.variotherm.at)

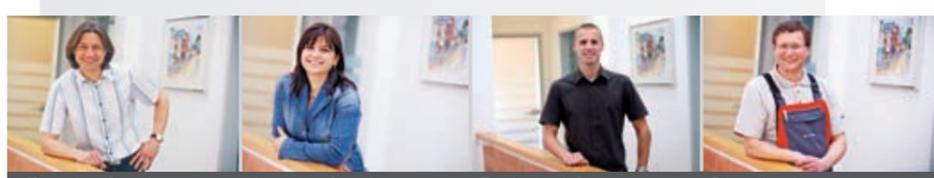
TECHNICS

Modular Wall Heating/Cooling

VarioFix Floor Heating System



**Solar-Active House in Carinthia**  
 Commissioned by: Sonnenkraft Österreich Vertriebs GmbH, AT-9300 St. Veit / Glan  
[www.sonnenkraft.at](http://www.sonnenkraft.at)  
 Architect: Architekturbüro Reinberg ZT GmbH, AT-1070 Wien  
[www.reinberg.net](http://www.reinberg.net)  
 Variotherm systems: 34 m<sup>2</sup> MODULAR WALL HEATING/COOLING  
 350 m<sup>2</sup> FLOOR HEATING SYSTEM VARIOFIX  
 Heating: Heat pump, part-solar space heating



Exterior Service Peter Unterrainer      Interior Service Pamela Papst      Technical Support Manfred Thallermayr      Distribution Janusz Mariciniac

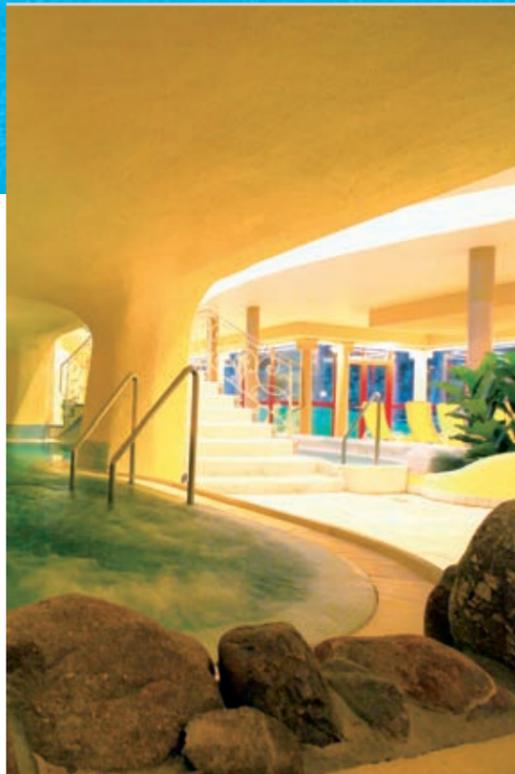
THE VARIOTHERM TEAM FOR THIS PROJECT

# A whole world of comfort



This 5-star hotel is located in Bad Kleinkirchheim, in the heart of Carinthia at the foot of the picturesque Nockberge. A place which not only offers wonderful opportunities for hiking and skiing, but a place you can immerse yourself in: the hotel has its own 2,100 m<sup>2</sup> spa world. Guests can enjoy an indoor thermal pool, an outdoor swimming pool, an outdoor Jacuzzi on two floors with a slide and waterfall, an indoor thermal whirlpool, various saunas, two steam baths, a herb and aroma grotto, two tepidaria and, and, and...

Just to ensure guests don't get cold feet in winter, this wonderful spa world is fitted with 2,950 m<sup>2</sup> of Variotherm floor heating. The ultra-thin VarioKomp floor heating also provides comfort in the bathrooms and toilets. And the cosy warmth of the salt rock tepidarium and the vital oasis is provided by a Variotherm EasyFlex wall heating system. When it comes to feeling good and relaxing, Variotherm is always first choice.

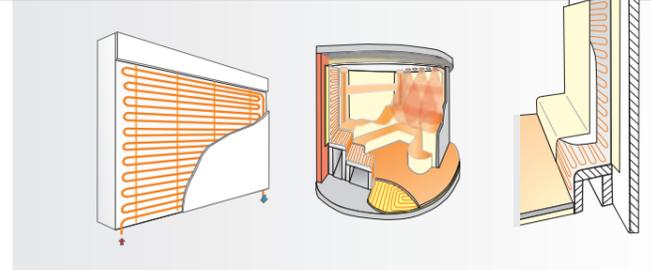
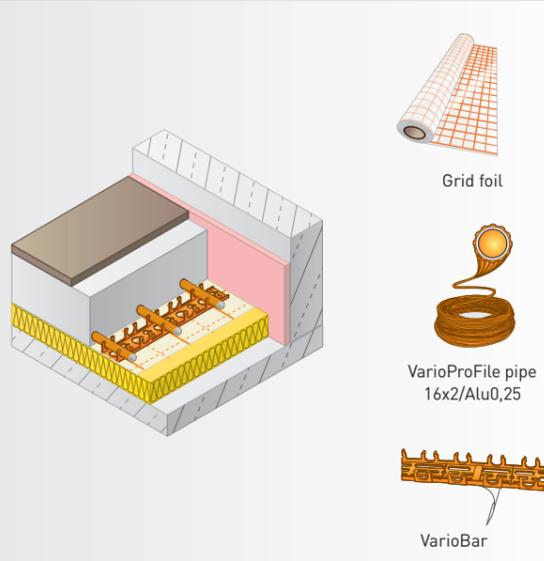
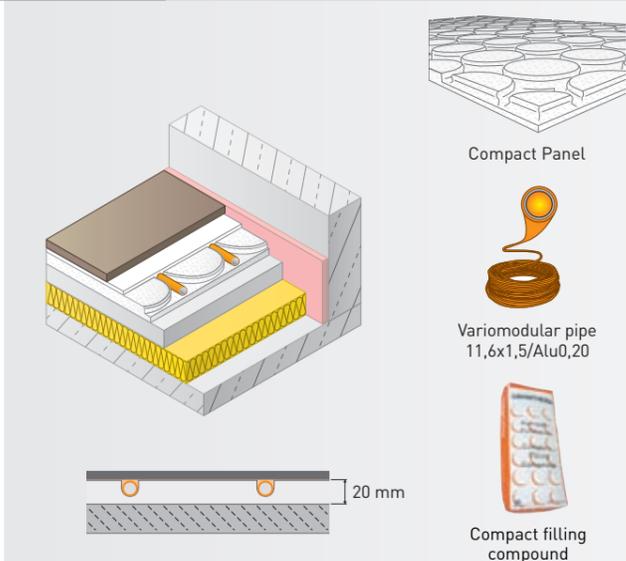


More technics on [www.variotherm.at](http://www.variotherm.at)

## TECHNICS VarioComp Floor Heating System

## VarioRast Floor Heating System

## EasyFlex Wall Heating System



### Hotel Pulverer in Bad Kleinkirchheim

Comissioned by: Hotel Pulverer, AT-9546 Bad Kleinkirchheim [www.pulverer.at](http://www.pulverer.at)

Planning and Construction: STRABAG, Zweigstelle AT-9545 Radenthein  
 Architect: Ebner BauGmbH & Co KG, AT-5310 Mondsee  
 Installatation: Egger Sanitär- u. Heizungstechnik GmbH, AT- 9811 Lendorf, [www.egger-sanitaer.at](http://www.egger-sanitaer.at)

Variotherm Systems: 460 m<sup>2</sup> FLOOR HEATING SYSTEM VARIOKOMP  
 2.950 m<sup>2</sup> FLOOR HEATING SYSTEM VARIORAST  
 75 m<sup>2</sup> EASYFLEX WALL HEATING/COOLING



Exterior Service Peter Unterrainer Interior Service Carina Nebel Technical Support Thomas Baumgartner Distribution Dan Timofte

THE VARIOOTHERM TEAM FOR THIS PROJECT

# With pizzazz and perfection

Franz Grand, whose company is based in Seebarn, Lower Austria, refers to his firm as, "an installation company with pizzazz. We are a small business with 4 employees that guarantees careful planning, top quality and reliable performance." Perfect customer service is a given, even small repairs are completed reliably and in no time. Franz Grand sets the highest quality standards in his choice of products. Products from cheap providers have no place in his product range.

In the last three years, Frank Grand has installed 43 Variotherm systems and is very happy with the total package offered by Variotherm. At Variotherm, everything is perfect: quality, service, advice and even the price.

Franz Grand's company motto is, "There are no problems that can't be solved! But there are often incompetents that cannot solve them."



Meisterinstallateur Franz GRAND

Hauptstraße 86  
AT-3484 Seebarn  
Tel.: 02738 / 8800  
www.f-grand.at

# The power of the sun



"Die Dezentrale", our Variotherm dealer in Luxembourg, has been banking on the power of the sun since its founding in 1997. Die Dezentrale sees solar heating as the primary energy source for all the projects it plans. The basis for this company philosophy is a highly efficient surface heating system of the highest quality which guarantees optimum solar yields with the lowest temperatures.

Variotherm is "Die Dezentrale's" ideal partner, as it always offers maximum quality, the greatest levels of comfort and physiological balance during its consulting discussions and in its concepts.

"Die Dezentrale" is a two-man operation (Christof Becker Dipl. Ing. & Andreas Schwarz) that develops complete building concepts and aims to ensure maximum customer satisfaction with the highest product quality.

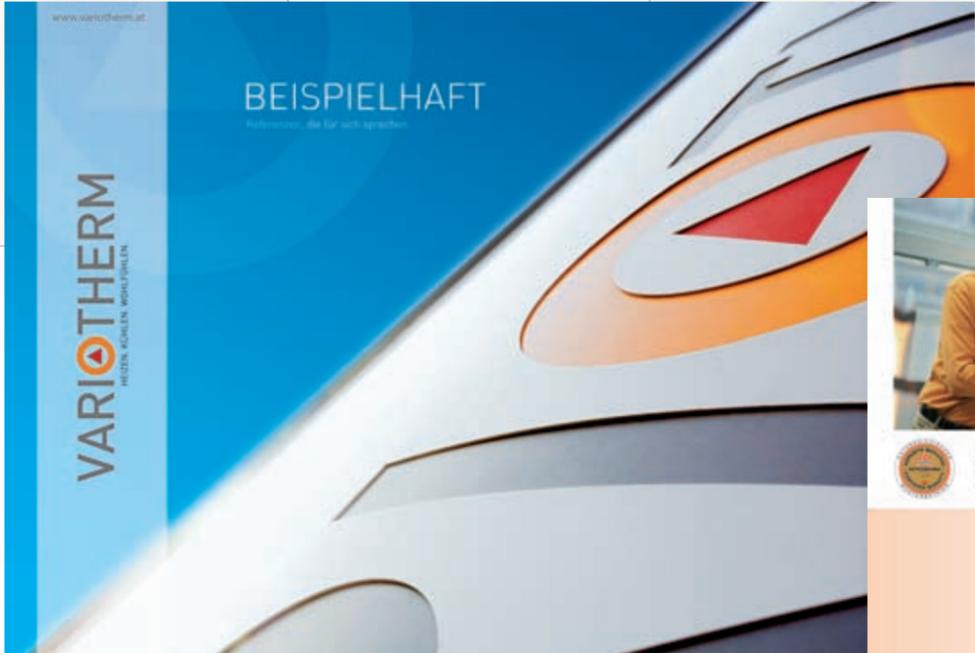


**Die Dezentrale**  
84a, Duarrefstrooss  
LU-9990 Weiswampach  
Tel.: 00352 / 26958111  
www.die-dezentrale.lu

# A master piece

It's finally here! 54-pages long, incredibly interesting, very informative: the new Variotherm reference catalogue. It not only has a fresh new layout on the outside, but has also been completely restructured on the inside. All reference projects are clearly divided into four groups: *living, culture & social, training* and *business*. It is simply exemplary with its many new exciting reference projects. Order now!

More references on [www.variotherm.at](http://www.variotherm.at)



# New technical documents? Excellent!

Alexander Schauer has been at Variotherm for just over a year now and is responsible for redesigning our technical documentation. He has drafted countless new datasheets from D for ducted channel heating to P for Pressing. For example the planning and installation instructions for screed floor heating planning, distribution and regulation as well as heating and cooling also bear his signature.

Incidentally, you can now download all these wonderful new documents from the specialist section at [www.variotherm.at](http://www.variotherm.at)!





# Let's go green!

The Variotherm company outing in 2010 was a totally 'green' affair. Firstly, we stayed away from cars and travelled there by train. Secondly, we visited the natural green of the countryside. We travelled from Leobersdorf to Pfaffstätten by train, where the route took us through fields and vineyards. Then we climbed the heavily forested ridges of the Anninger. We indulged in a hearty brunch at the Rudolf Proksch Hütte. Then we went further up to the top of Anninger (675 m above sea level) and then down into the valley to Richard Hof, where we enjoyed a break for lunch. Then, our path led us via Gumpoldskirchen to Veiglhütte. Here we tucked into giant sandwiches, cold beer and had a fun football match where the Variotherm women showed the men how to 'bend it like Beckham'. After arriving back in Leobersdorf in the evening, the general feeling was: 'what a wonderful day'.



# An iron team

Did you know that IRONMAN Austria 2010, along with IRONMAN Florida, are among the largest contests in the IRONMAN world series? With 2,400 registrations and around 100,000 visitors, this is a top-class sporting event.

The athletes taking part are also top class. This year an estimated 2,200 athletes were at the start line, including our very own Variotherm team with Alexander Watzek, Manfred

Kobald and Freddy Schlögel. The Variotherm team was cheered on by loyal fans during their 3.8 km swim, 180 km cycle and 42.195 km run and their support did the trick: all three participants successfully finished IRONMAN 2010. Wolfgang Mader, also a member of Variotherm's Ironman team, had his own achievement: he finished the Half-IRONMAN in St. Pölten.

Left: Manfred Kobald, Alexander Watzek, Robert Mader, Freddy Schlögl



# Welcome to Variotherm!

**Name:**  
**Clemens BURGSTALLER**

**Training:** AHS Matura, 3 years of college studying marketing and sales

**Hobbies:** Mountains - summer and winter, on foot, biking and skiing

**Job at Variotherm:** Sales Austria West

**Name:**  
**Carina NEBEL**

**Training:** HLA Wiener Neustadt - majoring in information systems

**Hobbies:** dancing, inline skating, swimming, snowboarding, painting, cooking

**Job at Variotherm:** Office-based sales

**Name:**  
**Petrea PURCARIN**

**Training:** Metal worker

**Hobbies:** Football

**Job at Variotherm:** Picking, manufacturing displays, making component parts for our trade fairs.

**Name:**  
**Renate PAUL**

**Training:** Office clerk

**Hobbies:** reading, cooking, hiking

**Job at Variotherm:** Cleaning work & production



**My Tasks:** I work with innovative products which I am convinced of and believe in. I find the best solution for our customers and help them if they need support.

**About Variotherm:** An environment in which I feel well looked after. Our team doesn't think, 'Great someone else is doing it', we try to overcome challenges together.



**My Tasks:** Interface between customers, field sales and production. Finding solutions that everyone is happy with.

**About Variotherm:** My skills are challenged at Variotherm and I feel like a valuable member of a great team.



**My Tasks:** I like to design our products for transport cleanly. Building up the trade fair stand is fun.

**About Variotherm:** A company like Variotherm gives you the security of a job for many years.



**My Tasks:** I get our great company building cleaned.

**About Variotherm:** It's great to work in the Variotherm Team.

# The comfort factor

How does a company define itself? Through its products, its brand identity and market presence? Not only. Successful companies stand out because they have a strong corporate culture and live it too.

Since its founding, Variotherm's corporate culture has been very strongly influenced by a sense of responsibility for mankind and the environment. That's why we are constantly working on the development and advancement of energy-efficient, low-temperature heating systems. At the same time, we are looking for targeted partnerships with engineers, planners and developers involved in generating alternative forms of energy. In general, our goal is for people to feel comfortable with our heating and cooling systems.

Everyone involved in our everyday life or who is a guest at Variotherm should also feel comfortable. That's why there are numerous organic and fairtrade products at our company. We offer our guests biological teas from Sonnentor and organic chocolate from BioArt and Zotter. For guests and employees we also have organic fruit juices from Schäfer, organic beer certified by Demeter from the Gusswerk brewery and an organic coconut drink from Dr. Martins. And you'll also find copies of the publication 'Lebensart'. It is Austria's sustainability magazine which reports on future-proof developments.

## What we like:

Sonnentor (teas, spices, coffee, sweets, ...)  
[www.sonnentor.com](http://www.sonnentor.com)

BioArt (chocolate, coffee, sugar, rice, brandy ...)  
[www.bioart.at](http://www.bioart.at)

Zotter (chocolate)  
[www.zotter.at](http://www.zotter.at)

Schäfer (fruit and vegetable juices, syrups)  
[www.bioschaefer.at](http://www.bioschaefer.at)

Brauerei Gusswerk (beer)  
[www.brauhaus-gusswerk.at](http://www.brauhaus-gusswerk.at)

Dr. Martins (coconut products)  
[www.dr-martins.at](http://www.dr-martins.at)

Lebensart (magazine)  
[www.lebensart.at](http://www.lebensart.at)

